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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/549,828

09/20/2005

Timothy J Person

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109 7590 03/18/2009

The Dow Chemical Company  
Intellectual Property Section  
P.O. Box 1967  
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EXAMINER

GRAY, JILL M

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

03/18/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/549,828	<b>Applicant(s)</b> PERSON ET AL.	
	<b>Examiner</b> Jill Gray	<b>Art Unit</b> 1794	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 December 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,4-7 and 9-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4-7 and 9-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Amendment***

The rejection of claim 8 under 35 U.S.C. 112, second paragraph is moot in view of applicants' amendments.

### ***Claim Rejections - 35 USC § 102***

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

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under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1, 4-7, 9, 13-16 and 22 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over European Patent Publication EP 334,993 (Watanabe).

6. Watanabe discloses a semiconductive composition suitable as a layer on a power cable, and method of making, said composition comprising a mixture of a high-temperature polymer and a soft polymer and a conductive filler and required by present claims 1 and 14-16. The polymer is of the type contemplated by applicants in present claims 4-6. In addition, the conductive filler can be carbon black, per claim 7.

Regarding the requirement that the high-temperature polymer is a polymer suitable to impart heat resistance to the semiconductive cable layer and the soft polymer being a polymer that enhances the processing characteristics of the high temperature polymer, Watanabe teaches polymers of the type contemplated by applicants, hence, the examiner has reason to believe that the prior art polymers meet these requirements in the absence of factual evidence to the contrary. Regarding the requirement that the resulting semiconductive cable layer have a heat resistance of less than 100% as measured by a Hot Creep test, it is the position of the examiner that the composition of Watanabe is the same as or substantially similar to that contemplated by applicants thus, this property would be the same as well, in the absence of factual evidence to the

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contrary. See entire document and in particular, abstract and page 3, lines 1-40. In addition, Watanabe discloses that a curing agent and a compatibilizing polymer can be included as required by claims 9 and 13. See examples. Regarding claim 22, the skilled artisan would immediately envisage formation a power cable construction.

7. Therefore, the teachings of Watanabe anticipate or in the alternative, render obvious the invention as claimed in present claims 1, 4-7, 9, 13-16, and 22.

8. Claims 1, 4-7, 9-18, and 22 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over European Patent Publication EP 858,081 (Yoshida).

9. Yoshida discloses a semiconductive composition suitable as a layer on a power cable, and method of making, said composition comprising a mixture of a high-temperature polymer and a soft polymer and a conductive filler and required by present claims 1 and 14-18. The polymer is of the type contemplated by applicants in present claims 4-6. In addition, the conductive filler can be carbon black, per claim 7.

Regarding the requirement that the high-temperature polymer is a polymer suitable to impart heat resistance to the semiconductive cable layer and the soft polymer being a polymer that enhances the processing characteristics of the high temperature polymer, Yoshida teaches polymers of the type contemplated by applicants, hence, the examiner has reason to believe that the prior art polymers meet these requirements in the absence of factual evidence to the contrary. Regarding the requirement that the resulting semiconductive cable layer have a heat resistance of less than 100% as measured by a Hot Creep test, it is the position of the examiner that the composition of

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Yoshida is the same as or substantially similar to that contemplated by applicants thus, this property would be the same as well, in the absence of factual evidence to the contrary. See entire document and in particular, abstract and page 3, lines 1-40. In addition, Yoshida discloses that a curing agent and a compatibilizing polymer can be included as required by claims 9-13. See examples. Regarding claim 22, the skilled artisan would immediately envisage formation a power cable construction.

10. Therefore the teachings of Yoshida would have anticipated or in the alternative rendered obvious this invention as claimed in present claims 1, 4-7, 9-18, and 22.

11. Claims 1, 4-7, 13-16, and 19-22 are rejected under 35 U.S.C. 102(a) and (e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over PCT Publication WO 02/31051 (Easter).

12. Easter discloses a semiconductive composition suitable as a layer on a power cable, and method of making, said composition comprising a mixture of a high-temperature polymer and a soft polymer and a conductive filler and required by present claims 1 and 14-16. The polymer is of the type contemplated by applicants in present claims 4-6. In addition, the conductive filler can be carbon black, per claim 7.

Regarding the requirement that the high-temperature polymer is a polymer suitable to impart heat resistance to the semiconductive cable layer and the soft polymer being a polymer that enhances the processing characteristics of the high temperature polymer, Easter teaches polymers of the type contemplated by applicants, hence, the examiner has reason to believe that the prior art polymers meet these requirements in the absence of factual evidence to the contrary. Regarding the requirement that the

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resulting semiconductive cable layer have a heat resistance of less than 100% as measured by a Hot Creep test, it is the position of the examiner that the composition of Easter is the same as or substantially similar to that contemplated by applicants thus, this property would be the same as well, in the absence of factual evidence to the contrary. See entire document and in particular, abstract and page 3, lines 1-40. In addition, Easter discloses that a curing agent and a compatibilizing polymer can be included as required by claim 13. See examples. Regarding claim 22, the skilled artisan would immediately envisage formation a power cable construction.

13. Therefore the teachings of Easter would have rendered obvious the invention as claimed in present claims 1, 4-7, 13-16, and 19-22.

14. Claims 1, 4-7, and 9-22 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Yamazaki et al., 6,284,374 (Yamazaki).

15. Yamazaki discloses a strippable semiconductive power cable composition and cable comprising a mixture of a high-temperature polymer and a soft polymer and a conductive filler and process of making, per claims 1 and 14-16. See entire document and for example, the abstract. In addition, Yamazaki discloses that the high temperature polymer can be polypropylene and the soft polymer is a polyethylene copolymer of a polar monomer and a nonpolar monomer, per claims 4-6. See column 3, lines 32-50. The conductive filler can be carbon black, as required by claim 7. See column 4, lines 27-37. Also, Yamazaki discloses that his composition comprises a curing agent, coupling agent and a compatibilizing polymer as required by claims 9-13,

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17 and 22. See column 4, lines 45-47, and column 5, lines 7-22. Regarding claims 18-21, Yamazaki discloses a process for preparing the power cable comprising extruding each of the compositions onto a cable and crosslinking. See Examples. Regarding the requirement that the resulting semiconductive cable layer have a heat resistance of less than 100% as measured by a Hot Creep test, it is the position of the examiner that the composition of Yamazaki is the same as or substantially similar to that contemplated by applicants thus, this property would be the same as well, in the absence of factual evidence to the contrary.

16. Therefore, the teachings of Yamazaki anticipate or in the alternative render obvious the invention as claimed in present claims 1, 4-7, and 9-22.

### ***Response to Arguments***

17. Applicant's arguments filed December 24, 2008 have been fully considered but they are not persuasive.

Applicants argue that the prior art references do not teach heat resistance as a critical feature of the resulting semiconductive cable layer, nor the selection of a high-temperature polymer that would yield the desired heat resistance or soft polymer that would enhance the processing characteristics of the high-temperature polymer.

In this regard, it is the examiner's position that the semiconductive compositions taught by the prior art disclose polymer mixtures comprising polymers that are the same as or substantially similar to those set forth by applicants. Thus, the examiner has reason to believe that compositions of the prior art have heat resistance properties that



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are substantially the same as or similar to those set forth by applicants, in the absence of factual evidence to the contrary.

No claims are allowed.

### ***Conclusion***

18. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jill Gray whose telephone number is 571-272-1524. The examiner can normally be reached on M-Th and alternate Fridays 8:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks can be reached on 571-272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jill Gray/  
Primary Examiner  
Art Unit 1794

jmg